

Application No. 10/657,837
Amendment dated October 28, 2005
Reply to Office Action of July 28, 2005

Amendments to the Claims:

1. (Currently Amended) A prosthesis to replace all or a portion of a natural facet joint on a ~~vertebral body~~ vertebra, comprising:
a fastening element adapted to be ~~installed within the vertebral body at or near a pedicle and~~
~~without support by a lamina~~ removably attached to the vertebra; and
a structure removably attached to the fastening element; and
an artificial prosthetic facet joint structure articulating surface removably attached to the
structure ~~carried by the fastening elements adapted and configured to replace all or a portion of a~~
~~natural facet joint.~~
2. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint~~
~~structure~~ structure is fixed to the fastening element.
3. (Withdrawn) A prosthesis according to claim 1 wherein the artificial facet joint structure is
fixed to the fastening element by an adhesive or cement.
4. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint~~
~~structure~~ structure is fixed to the fastening element by mechanical attachment.
5. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint~~
~~structure~~ prosthetic facet joint articulating surface is removably carried by the fastening element.
6. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint~~
~~structure~~ structure is removably attached to the fastening element by frictional engagement.
7. (Withdrawn) A prosthesis according to claim 1 wherein the artificial facet joint structure is
removably attached to the fastening element by a Morse taper.
8. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint~~
~~structure~~ prosthetic facet joint articulating surface comprises an insert fitted to the ~~fastening element~~
structure.
9. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint~~
~~structure~~ prosthetic facet joint articulating surface comprises an insert fitted by frictional engagement
to the ~~fastening element~~ structure.
10. (Withdrawn) A prosthesis according to claim 1 wherein the artificial facet joint structure
comprises an insert fitted by a Morse taper to the fastening element.

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11. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint structure~~ prosthetic facet joint articulating surface comprises a removable insert fitted to the ~~fastening element structure~~.
12. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint structure~~ structure pivots with respect to the fastening element.
13. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint structure~~ prosthetic facet joint articulating surface is adapted and configured to articulate with a portion of a facet joint of an adjoining ~~vertebral body~~ vertebra.
14. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint structure~~ prosthetic facet joint articulating surface is adapted and configured to replace a caudal portion of a natural facet joint.
15. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint structure~~ prosthetic facet joint articulating surface is adapted and configured to replace a caudal portion of a natural facet joint and articulate with a cephalad portion of a facet joint of an adjoining ~~vertebral body~~ vertebra.
16. (Currently Amended) A prosthesis according to claim 1 wherein the ~~artificial facet joint structure~~ prosthetic facet joint articulating surface is made of at least one selected prosthetic material.
17. (Currently Amended) A prosthesis according to claim 16 wherein the selected prosthetic material includes polyethylene, rubber, tantalum, titanium, chrome cobalt, surgical steel, bony in-growth material, ceramic, artificial bone, or a combination thereof.
18. (Currently Amended) A prosthesis according to claim 1 wherein the fastening element is fixed to the ~~vertebral body~~ vertebra by an adhesive or cement.
19. (Original) A prosthesis according to claim 1 wherein the fastening element includes a bony in-growth material.
20. (Withdrawn) A method of replacing, on a vertebral body, all or a portion of a natural facet joint using the prosthesis defined in claim 1 to provide improved support for the spinal column, the method comprising the steps of
 - (i) removing all or a portion of a natural articular process from the vertebral body, and

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(ii) fixing the prosthesis as defined in claim 1 to the vertebral body to replace the removed portion of the natural articular process with the artificial facet joint structure.

21. (Withdrawn) A method according to claim 20 further including a step of removing at least some of the lamina from the vertebral body.

22. (Withdrawn) A method according to claim 20 further including a step of removing at least part of a pedicle from the vertebral body.

23. (New) A prosthesis according to claim 1 wherein the structure is fixed to the prosthetic facet joint articulating surface.

24. (New) A prosthesis according to claim 1 wherein the fastening element is attached to the vertebra at or near a pedicle.

25. (New) A prosthesis according to claim 1 wherein the fastening element is attached to the vertebra at a location away from a pedicle.

26. (New) A prosthesis according to claim 1 wherein the prosthetic facet joint articulating surface is adapted and configured to replace a cephalad portion of a natural facet joint.

27. (New) A prosthesis according to claim 1 wherein the prosthetic facet joint articulating surface is adapted and configured to replace a cephalad portion of a natural facet joint and articulate with a caudal portion of a facet joint of an adjoining vertebra.

28. (New) A prosthesis according to claim 1 wherein the fastening element is made of at least one selected prosthetic material.

29. (New) A prosthesis according to claim 28 wherein the selected prosthetic material includes polyethylene, rubber, tantalum, titanium, chrome cobalt, surgical steel, bony in-growth material, ceramic, artificial bone, or a combination thereof.